

REMARKS

Reconsideration of the application is requested in view of the remarks below. Claims 1-13 are pending. Claim 1 has been amended and is supported in the Specification at page 14, lines 14-16. Claims 12, 13 and 14 have been added and support can be found at page 11, lines 25-28, at page 13, lines 1-2, respectively. Further, Claims 12, 13 and 14 have been added to more clearly and distinctly claim Applicants' invention over the prior art. No new matter has been added.

Rejection of Claims 4-7 Under 35 USC 112, second paragraph

The Office Action rejected Claims 4-7 under 35 USC 112, second paragraph, as indefinite. The rejection should be withdrawn in view of the remarks below and the modifications above.

Regarding Claim 4, Claim 4 has been amended in light of the comments in the outstanding Office Action. At line 28 "of the phthalocyanine" has been amended to be --of a benzo ring of the phthalocyanine--. At line 24, "alkinyl" has been amended to be --alkynyl--.

At line 35, the term "reasonable" does not make Claim 4 indefinite. The test for definiteness under 35 U.S.C. 112, second paragraph is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986). Accordingly, in Claim 4 the phrase "(B)m denotes a chemically reasonable sequence of bridge members B in which m is from 1 to 10" allows one skilled in the art to understand what is claimed, and thus Claim 4 is definite. Reconsideration is requested.

Rejection of Claims 1-5 and 8-11 Under 35 USC 102(b)

The Office Action rejected Claims 1-5 and 8-11 under 35 USC 102(b) as anticipated by Umehara et al. The rejection should be withdrawn in view of the remarks below and the modifications above.

Rejection of Claims 1-5 and 8-11 Under 35 USC 102(b)

1. The Office Action rejected Claims 1-4 and 8-11 under 35 USC 102(b) as anticipated by Umehara et al. This rejection should be withdrawn in view of the amendments above and remarks below.

The Office Action alleges that Umehara et al discloses in Example 4 a phthalocyanine compound (Office Action, page 3, lines 8-9). And, the Office Action further alleges that the recording layer is inherently able to be recorded upon using at least one wavelength in the range of 360-460nm (Office Action, page 3, lines 9-10).

It is well settled that in order for a prior art reference to anticipate claim, the reference must disclose each and every element of claim with sufficient clarity to prove its existence in prior art. The disclosure requirement under 35 USC 102 presupposes knowledge of one skilled in art of claimed invention, but such presumed knowledge does not grant license to read into prior art reference teachings that are not there. See Motorola Inc. v. Interdigital Technology Corp. 43 USPQ2d 1481 (1997 CAFC). It is also well-settled that a 35 USC 102 rejection must rest upon the literal teachings of the reference and that the teachings must disclose every element of the claimed invention in as complete detail as is contained in the claim (See. *Jamesbury Corp v. Litton Industrial Products, Inc.* 225 USPQ, 253, 256 (CAFC 1985); *Kalman v. Kimberly-Clark Corp* 218 USPQ 781, 789 (Fed. Cir. 1983)).

Further, it is also well settled U.S. law that if an invention is anticipated under inherency, the invention must flow as a necessary conclusion from the prior art, not just a possible one. The fact that the prior art *may* possibly have the same features as the claimed invention will not substantiate a finding of inherency (*In re Oerlich*, 212 USPQ 323, 326 (CCCPA 1981)). Further, in relying upon the theory of inherency, the examiner must provide, a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied art. (*Ex parte Levy*, 17 USPQ2d 1461, 1465 (Bd. Pat. Appl. & Inter 1990)).

Claim 1 has been amended and is directed to an optical data medium

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comprising a substrate that is optionally already coated with one or more reflective layers and on the surface of which have been applied

- (1) an information layer that can be recorded on using light, wherein the information layer contains (i) a light-absorbing compound comprising at least one phthalocyanine and (ii) optionally a binder,
- (2) optionally one or more reflective layers, and
- (3) optionally a protective layer or a further substrate or a covering layer,

wherein the optical data medium can be recorded on and read using blue light having a wave length in the range of about 360 nm to about 460 nm.

The Office Action's allegation that Umehara et al. discloses inherent features of Applicants' invention is not supported by the facts. Umehara et al discloses a technique of optical data storage media having a recording layer containing an organic dye and an intermediate layer containing a light absorber and/or a thermal decomposition promoter. Umehara et al specifies that different dyes are used with different laser wavelengths. Umehara et al discloses for blue laser of the wavelength 400-440nm, no Pc-dyes are used (col. 22, lines 65 to col. 23, line 8) and for IR laser (CD-r), Pc dyes are used (col. 7, lines 38-41). Umehara et al refers to both data formats and does not use and does not provide a data medium from IR and blue laser systems in similar amounts. In fact, there is no interchanability of Pc-dyes for various systems using different wavelengths of light and no inherency exists as alleged by the Examiner. Therefore, Umehara et al does not disclose any Pc-dyes in combination with the blue laser light. Thus, the fact that the prior art *may* possibly have the same features as the claimed invention will not substantiate a finding of inherency under Umehara et al.

Further, in relying upon the theory of inherency, the Examiner does not provide, a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic of the "recording layer is inherently able to be recorded upon using as least one wavelength in the range of 360nm-460nm" necessarily flows from the teachings of Umehara et al. Therefore, Umehara et al does not anticipate "at least one phthalocyanine and wherein the optical data medium can be recorded on and read using blue light having a wave

length in the range of about 360 nm to about 460 nm," of Applicants' invention of Claim 1.

Regarding Claims 2-4 and 8-9, Claims 2-4 and 8-9 depend from Claim 1, either directly or indirectly, and as discussed above Claim 1 is believed to be allowable. Accordingly, Claims 2-4 and 8-9 are also believed to be allowable.

Regarding Claims 10 and 11, Claims 10 and 11 related to optical medium data according to Claim 1, which as discussed is believed to be allowable, on which data is recorded. Accordingly, Claims 10 and 11 are also believed to be allowable. Reconsideration is requested.

2. The Office Action rejected Claims 1-5 and 8-11 under 35 USC 102(b) as anticipated by Kimura et al. This rejection should be withdrawn in view of the amendments above and remarks below.

Claim 1 is related to an optical data medium as discussed above.

The Office Action alleges that the "recording layer is inherently able to be recorded upon using at least one wavelength in the range of 360nm-460nm." Further, the Office Action alleges that the "data recorded in the medium using the laser of the example cited can be formed using a laser operating in the 360-460nm wavelength and that these spots would be undistinguishable."

Kimura et al discloses optical recording medium having Pc-dyes that have a formula that is limited to reading and writing by IR lasers (CD-R) (col. 16, lines 44-49). As discussed above, the optical recording medium used with the IR laser is not formed for use with a blue light. Thus, it is not inherent that Kimura et al is able to be recorded upon using a wavelength in the range of 360nm-460nm. Thus, Kimura et al does not disclose that the "optical data medium can be recorded on and read using blue light having a wave length in the range of about 360 nm to about 460 nm, of Applicants' invention of Claim 1.

The Office Action alleges that claims 10 and 11 are to the recorded article and that while using the shorter wavelength allows smaller spot sizes to be formed at the same NA, the claims are not limited to bit recorded at any particular NA" (Office Action, page 4, lines 2-4).

The structure implied by the process steps should be considered when

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assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Gamero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979).

Regarding Claims 2-4 and 8-9, Claims 2-4 and 8-9 depend from Claim 1, either directly or indirectly, and as discussed above Claim 1 is believed to be allowable. Accordingly, Claims 2-4 and 8-9 are also believed to be allowable.

Regarding Claims 10 and 11, Claims 10 and 11 related to optical medium data according to Claim 1 on which data is recorded. Kimura et al is directed to a disk that is limited to functioning as a CD or CRD-ROM and as discussed above Kimura also does not disclose Applicants' invention of Claim 1. Thus, Kimura et al does not disclose the structure of Applicants' invention of Claims 10 and 11. Reconsideration is requested.

3. The Office Action rejected Claims 1-5 and 8-11 under 35 USC 102(b) as anticipated by Taskasu et al. This rejection should be withdrawn in view of the amendments above and remarks below.

The Office Action alleges that Example 1 uses an AL chloride coordinated phthalocyanine which is vapor deposited and coated with a reflective layer" (Office Action, page 4, lines 7-8).

Taskasu et al discloses optical recording medium having Al-Cl-Pc with a wavelength of 820 nm that is IR, and no medium is formed for blue laser reading and writing. Even though vapor deposited dye is disclosed, Taskasu et al does not disclose at least one phthalocyanine and wherein the optical data medium can be recorded on and read using blue light having a wave length in the range of about 360 nm to about 460 nm, of Applicants' invention of Claim 1. Reconsideration is requested.

Regarding Claims 2-4 and 8-9, Claims 2-4 and 8-9 depend from Claim 1, either directly or indirectly, and as discussed above Claim 1 is believed to be allowable. Accordingly, Claims 2-4 and 8-9 are also believed to be allowable.

Regarding Claims 10 and 11, Claims 10 and 11 related to optical medium

data according to Claim 1 on which data is recorded. As discussed, Claim 1 is believed to be allowable. Accordingly, Claims 10 and 11 are also believed to be allowable. Reconsideration is requested.

4. The Office Action rejected Claims 1-5 and 8-11 under 35 USC 102(b) as anticipated by Konda et al. This rejection should be withdrawn in view of the amendments above and remarks below.

The Office Action alleges the Example uses "an Al chloride coordinated phthalocyanine ... which is coated on a substrate with a reflective layer" (Office Action, page 4, lines 11-12).

Konda et al discloses an optical recording medium having Al-Cl-Pc and is utilized with laser wavelength of 830nm. Thus, Konda et al does not disclose Applicants' invention including "at least one phthalocyanine and wherein the optical data medium can be recorded on and read using blue light having a wave length in the range of about 360 nm to about 460 nm."

Regarding Claims 2-4 and 8-9, Claims 2-4 and 8-9 depend from Claim 1, either directly or indirectly, and as discussed above Claim 1 is believed to be allowable. Accordingly, Claims 2-4 and 8-9 are also believed to be allowable.

Regarding Claims 10 and 11, Claims 10 and 11 related to optical medium data according to Claim 1 on which data is recorded. As discussed, Claim 1 is also believed to be allowable. Accordingly, Claims 10 and 11 are also believed to be allowable. Reconsideration is requested.

5. The Office Action rejected Claims 1-5 and 8-11 under 35 USC 102(b) as anticipated by Aoyangi et al. This rejection should be withdrawn in view of the amendments above and remarks below.

The Office Action alleges that Aoyangi et al uses an Al chloride coordinated phthalocyanine ... which is spin coated with a PVA binder" (Office Action, page 4, lines 15-16).

Aoyangi et al discloses a system with Al-Cl-Pc, as also disclosed by Taskasu et al and Konda et al, that is used with a IR laser and not a blue laser. Thus, Aoyangi et al does not disclose "at least one phthalocyanine and wherein the optical

data medium can be recorded on and read using blue light having a wave length in the range of about 360 nm to about 460 nm, of Applicants' invention of Claim 1.

Regarding Claims 2-4 and 8-9, Claims 2-4 and 8-9 depend from Claim 1, either directly or indirectly, and as discussed above Claim 1 is believed to be allowable. Accordingly, Claims 2-4 and 8-9 are also believed to be allowable.

Regarding Claims 10 and 11, Claims 10 and 11 related to optical medium data according to Claim 1 on which data is recorded. As discussed, Claim 1 is also believed to be allowable. Accordingly, Claims 10 and 11 are also believed to be allowable. Reconsideration is requested.

6. The Office Action rejected Claims 1-5 and 8-11 under 35 USC 102(b) as anticipated by Bloom et al. This rejection should be withdrawn in view of the amendments above and remarks below.

Bloom et al discloses a technique to store data on a substrate. The material of the substrate is formed so that an IR laser, rather than a blue laser, is used to remove material (in Figure 2, for example, reference numeral 116 refers to the area where recording material is removed. Thus, the different laser wavelength and different technique of Bloom et al do not disclose at least one phthalocyanine and wherein the optical data medium can be recorded on and read using blue light having a wave length in the range of about 360 nm to about 460 nm, of Applicants' invention of Claim 1.

Regarding Claims 2-4 and 8-9, Claims 2-4 and 8-9 depend from Claim 1, either directly or indirectly, and as discussed above Claim 1 is believed to be allowable. Accordingly, Claims 2-4 and 8-9 are also believed to be allowable.

Regarding Claims 10 and 11, Claims 10 and 11 related to optical medium data according to Claim 1 on which data is recorded. As discussed, Claim 1 is also believed to be allowable. Accordingly, Claims 10 and 11 are also believed to be allowable. Reconsideration is requested.

7. The Office Action rejected Claims 1-5 and 8-11 under 35 USC 102(b) as anticipated by Miyamoto et al. This rejection should be withdrawn in view of the amendments above and remarks below.

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Miyamoto et al discloses optical recording media having Pc-dyes with Porphyrin cpd that is modified for using with a DVD (red laser). Specifically, the Pc-dye has one absorption peak of 600nm-800nm and differs from the absorption peak of porphyrin. Even though the Pc-dye may have an alternate absorption peak, the second component of porphyrin is required, and therefore Miyamoto et al discloses a chlorosilicon phthalocyanine that is used with a red laser. Thus, Miyamoto et al does not disclose an optical data medium of Applicants' invention of Claim 1.

Regarding Claims 2-4 and 8-9, Claims 2-4 and 8-9 depend from Claim 1, either directly or indirectly, and as discussed above Claim 1 is believed to be allowable. Accordingly, Claims 2-4 and 8-9 are also believed to be allowable.

Regarding Claims 10 and 11, Claims 10 and 11 related to optical medium data according to Claim 1 on which data is recorded. As discussed, Claim 1 is also believed to be allowable. Accordingly, Claims 10 and 11 are also believed to be allowable. Reconsideration is requested.

7. The Office Action rejected Claims 1-5 and 8-11 under 35 USC 103 as anticipated by Miyamoto et al. The rejection should be withdrawn in view of the amendments above and comments below.

Regarding Claim 1, Claim 1 has been amended and is directed to an optical data medium comprising a substrate that is optionally already coated with one or more reflective layers and on the surface of which have been applied

- (1) an information layer that can be recorded on using light, wherein the information layer contains (i) a light-absorbing compound comprising at least one phthalocyanine and (ii) optionally a binder,
 - (2) optionally one or more reflective layers, and
 - (3) optionally a protective layer or a further substrate or a covering layer,
- wherein the optical data medium can be recorded on and read using blue light having a wave length in the range of about 360 nm to about 460 nm.

As discussed above with reference to the 35 USC 102(b) rejection, Miyamoto et al does not teach or disclose Applicants' invention. Further, the Office Action

alleges that "[i]t would have been obvious to one skilled in the art to use spin coating to allow the addition of binders, rather than vapor deposition used in example 2 with a reasonable expectation of success based on the disclosure of equivalence and the desirability of adding a binder" (Office Action, page 5, lines 9-12). However, this allegation also does not provide sufficient support that Miyamoto et al obviates Applicants' invention. Reconsideration is requested.

8. The Office Action rejected Claims 1-5 and 8-11 under 35 USC 102(b) as anticipated by Umehara et al. This rejection should be withdrawn in view of the amendments above and remarks below.

The Office Action alleges:

that the recording layer is inherently able to be recorded upon using at least one wavelength in the range of 360-460nm... and that the data recorded in the medium using the laser of the example cited can be formed using a laser operating in the 360- 460 nm wavelength and these spots would be undistinguishable. [And,] ...that Claims 10 -11 are to the recorded article and that while using a shorter wavelength allows smaller spots sizes to be formed at the same NA, the claims are not limited to bit recorded at any particular NA or necessarily below the size able to be recorded at longer wavelengths.

Umehara et al discloses optical recording medium having a material that is recorded upon with a light of a wavelength from a CD-R, and not light of a wavelength of a blue laser system. Accordingly, Umehara et al does not disclose Applicants' invention including at least one phthalocyanine and wherein the optical data medium can be recorded on and read using blue light having a wavelength in the range of about 360 nm to about 460 nm. Reconsideration is requested.

Rejection of Claims 1-5 and 8-11 Under 35 USC 103(b)

1. The Office Action rejected Claims 1-11 under 35 USC 103(a) as unpatentable over either of Miyamoto et al, Tatsuzono et al, Bloom et al, Aoyangi et al, Kondo et al, or Takasu et al, further in view of JP 64-011892.

It is well-settled that to establish a *prima facie* case of obviousness, the USPTO must satisfy all of the following requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention,

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must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. *ProMold v. Great Lakes Plastics*, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996); *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Second, the proposed modification must have had a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. *Amgen v. Chugai Pharmaceutical Co.* 18 USPQ 2d 1016, 1023 (Fed Cir, 1991), *cert. denied* 502 U.S. 856 (1991). Third, the prior art reference or combination of references must teach or suggest all of the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496, (CCPA 1970).

As discussed above none of Miyamoto et al, Tatsuzono et al, Bloom et al, Aoyangi et al, Kondo et al, or Takasu et al disclose Applicants' invention. Further, JP64-011892 teaches a particular Ge-Pc having special axial ligands that are only used with laser wavelengths of 780 and 830 nm (see Table), and thus cannot be utilized with compounds other than those used with CD-R (IR laser). Accordingly, one skilled in the art would not be motivated or could not combine Miyamoto et al, Tatsuzono et al, Bloom et al, Aoyangi et al, Kondo et al, or Takasu et al with the teachings of JP64-011892 and arrive at Applicants' invention.

2. The Office Action rejected Claims 1-11 under 35 USC 103(a) as unpatentable over either of Miyamoto et al, Tatsuzono et al, Bloom et al, Aoyangi et al, Kondo et al, Takasu et al, further in view of Iwamura et al. and Whalley, "Cojugated Macrocycles. Part XXXII. Absorption Spectra of tetraazoporphyrins, formation of pyridine salts" (Whalley).

As discussed above none of Miyamoto et al, Tatsuzono et al, Bloom et al, Aoyangi et al, Kondo et al, or Takasu et al disclose Applicants' invention.

Iwamura et al discloses optical data storage media having porphyrins and no Pc-dyes. There is no teaching or suggestion that would motivate one skilled in the art to substitute Pc-dyes for porphyrins. In fact, the data is written and read with two different laser wavelengths (see col. 1, lines 58-59) to avoid destruction of information (see col. 1, lines 34-39). However, for example Applicants' invention avoids the use of two different laser wavelengths for reading and writing. Further, the write and read laser wavelengths of Iwamura et al are from 488 to

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680nm (table 1) and are higher than the laser wave lengths of Applicants' invention.

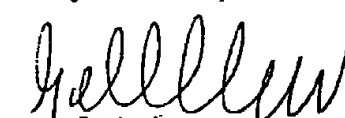
Regarding Whalley, Whalley merely discloses that the absorption spectra of Pc-dyes includes a range of 350nm. However, there is no suggestion or incentive in Whalley, Miyamoto et al, Tatsuzono et al, Bloom et al, Aoyangi et al, Kondo et al, or Takasu et al that would have motivated the skilled artisan to modify or combine any of the references to arrive at Applicants' invention.

Regarding Claims 2-11, Claims 2-11 depend from Claim 1, either directly or indirectly, and as discussed Claim 1 is believed to be allowable. Thus, Claims 2-11 are also believed to be allowable.

In view of the foregoing amendments and remarks, allowance of the pending claims is earnestly requested.

Respectfully submitted,

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